

Complications of Pulmonary Tuberculosis

1. Hemoptysis
2. Pleurisy
3. Pleural effusion
4. Empyema
5. Pneumothorax
6. Aspergilloma
7. Endobronchitis
8. Brochiectasis
9. Laryngitis
10. Cor pulmonale
11. Ca bronchus
12. Enteritis
13. Miliary Tuberculosis
14. HIV related opportunistic infections

Hemoptysis

- Usual in advanced disease
- May be first symptom
- Min, moderate or massive
- Massive → flooding of T.B. tree → death
- Min: inflammation → capillary break down – diapedesis
- Massive – erosion of arteries in necrotic areas / wall of cavity
- Post TB bronchiectasis

Pleurisy & Pleural Effusion

- Underlying tub lesion of lung (post primary TB)
 - Pneumonia lesion
 - Cavitory
- Hypersensitivity reaction to tub proteins with a few month of prior tuberculosis in young children
- S/S
 - Dull ache, pleuritic chest pain
 - Toxemia
 - Exertion dyspnoea
 - Clinically detectable > 500CC

CXR :

Fluid : Exudative

Sp gravity	> 1016
proteins	> 3 gm%
LDH	> 2/3 rd of serum LDS
Glucose	< 60 mg%
Lymphocytes	↑
ADA	↑
AFB	< 20%
Pl. biopsy	60-70%
Treatment	- ATT - pleural aspiration - steroid (Massive / B/L)

Tuberculosis Empyema

- Rupture of Tuberculosis lesion in pleural cavity → purulent fluid in pleural cavity (Empyema)
- Pus : mainly polymorphs
- Encystment in common
- Treatment:
 - ATT
 - I.C.D.
 - Decortication
 - Thoracoplasty

Pneumothorax

- Spon. Pneumothorax: rupture of sub. Pleural tuberculosis lesion
S/S

- Acute chest pain
- Tightness in chest
- Tension pneumo thorax
- Marked resp. distress
- Tachy cardiac & Cyanosis

Chest signs: of pneumo thorax

Treatment

- ATT
- I.C.D.
- Min: conservative

Contd..2

- Pyopneumothorax
 - Pus & Air both – ICD & ATT
- Aspergilloma
 - In well treated → cavity → Asp fumigations → ball in the cavity typing free
 - S/S
 - No S/S
 - Hemoptysis

Contd..3.

- CXR
 - Air crescent sign
 - Changes position on change of posture
- Treatment
 - Surgical resection / anti fungal

Tuberculosis Endo bronchitis

- Cause
 - Direct implantation of bronchi with TB bacilli (sputum)
 - Lymphatic
 - L.N. rupture
 - Hematogenous
- S/S
 - degree of obstruction
 - Cough, expectoration
 - Wheeze, haemoptysis
 - Collapse
- CXR
 - Pulmonary disease with collapse, obstruction emphysema
- FOB
 - Congestion, granulation, ulcer ,stenosis
- ATT, Costicosteroids

Bronchiectasis

- Mechanism;
 - Pr. Complex L.N. →compression →
 - Wall damage due to tub. Granulation tissue
 - Post tub : fibrosis
- S/S
 - Non retention of secretions
 - Asymptomatic (upper lobe)
 - S/S of P.T. (when active disease)

Tuberculosis Laryngitis

- Advanced P.T.
- Direct implantation of Larynx (+ve AFB)
- S/S
 - Soreness of throat
 - Dry hacking cough
 - Hoarseness of voice
 - Changed voice → whispering
 - Painful phonation
 - Epiglottic → painful swallowing
- Diagnosis
 - Laryngoscopy: ulcer, granuloma, paresis of Vocal cords
 - Sputum: +AFB
- Treatment
 - ATT & Corticosteroids

Corpulmoale

- Mechanism:
 - Extensive lung destruction → scarring
 - 5-7% cases of cor pulmonale in India due to P.T.
 - Destruction of Pul. Vasculature, tuberculous end arteritis & vaso constriction
 - Hypoxia → Pulmonary HT
- S/S
 - Dyspnoea, Cyanosis, RHF
 - P₂ loud & split
 - CXR
 - Prominent Pulmonary conus
 - Increased transverse dia of heart
 - Prominent pul arteries
 - ECG
 - P Pulmonale
 - RVH & strain
 - RBBB
- Treatment
 - Early diagnosis of active TB

Carcinoma Bronchus

PT with Ca in;

- Middle aged / elderly
- Tobacco smoking
- Scar carcinoma

Tuberculous Enteritis

- Secondary from Pulmonary Tuberculosis
- Swallowing of sputum (AFB +ve)
- Usually ileo-caecal area
- Ulcerated transverse diameter → fibrosis → SAIO
- S/S
 - Abdominal pain
 - Alternating diarrhoea & constipation visible peristalsis
 - Loss of appetite & weight
- Treatment
 - ATT
 - Internal obstruction → surgery

Miliary Tuberculosis

- Miliary like lesions → Miliary TB
- Hematogenous spread of Large no of bacilli
- When patient defenses are lower
- S/S
 - Fever, malaria, anorexia
 - Meningial, irritation (TBH)
- CXR
 - Diffuse evenly distributed micro nodular shadows
 - Sputum AFB: Negative usually
- Treatment
 - ATT + (steroid in sever cases)